FERRULE

.500

BODY

1.500

ECS M5122

CONTACT

.473

DIELECTRIC STIFFENER

.480

RETAINING RING

SPRING

3

SPECIFICATIONS

ELECTRICAL

IMPEDANCE: 50 OHMS NOMINAL
FREQUENCY RANGE: 0–4.5 GHz
VSWR: 1.70:1 MAXIMUM
INSERTION LOSS: 0.3 dB @ 4.5 GHz
DIELECTRIC WITHSTANDING: 2500 VRMS @ SEA LEVEL
WORKING VOLTAGE: 1000 VRMS @ SEA LEVEL
INSULATION RESISTANCE: 5000 MEGOHMS MINIMUM @ 500 VOLTS DC

MECHANICAL

MECHANICAL INTERFACE PER ARINC SPEC 600 FIGURE 19–54.2
TERMINATION STYLE: INNER CONTACT–SOLDER OR CRIMP
OUTER CONTACT–FERRULE CRIMP
CABLE RETENTION: 20 LBS

ENVIRONMENTAL

TEMPERATURE RATING: –65° TO +200°
VIBRATION: MIL–STD–202, METHOD 204, COND. B
SHOCK: MIL–STD–202, METHOD 213, COND. I
THERMAL SHOCK: MIL–STD–202, METHOD 107, COND. B
CORROSION: MIL–STD–202, METHOD 101, COND. B
MOISTURE RESISTANCE: MIL–STD–202, METHOD 106

MATERIALS

BODY: BRASS PER ASTM B16
FERRULE: ANNEALED BRASS PER ASTM B16
CABLE CONTACT: BRASS PER ASTM B16
CENTER CONTACT: BERYLLIUM COPPER PER ASTM B196
DIELECTRIC: TEFLON PER ASTM D1710

FINISHES

FERRULE: BRIGHT NICKEL PER QQ–N–290
BODY, CENTER CONTACT: GOLD PER MIL–G–45204

INSTALLATION INSTRUCTIONS

1. BEGIN BY CUTTING THE CABLE OFF SQUARE.

90°

2. STRIP THE CABLE AS SHOWN, BEGINNING WITH L1 AND ENDING WITH L2. TAKE CARE NOT TO NICK THE CONDUCTORS WHILE STRIPPING THE DIELECTRIC AND JACKET. THE USE OF A STRIPPER DESIGNED FOR COAXIAL CABLE IS RECOMMENDED.

L1 = .25
L2 = .70

3. SLIDE THE FERRULE AND ADHESIVE SHRINK TUBING OVER THE END OF THE CABLE. 1

4. USING TWEEZERS, FOLD THE OUTER BRAID BACK OVER THE CABLE JACKET, LEAVING AS MUCH WEAVE AS POSSIBLE.

5. SLIT FOIL LONGITUDINALLY AND FOLD BACK OVER THE OTHER SHIELD.

6. REMOVE THE DIELECTRIC FROM THE CENTER CONDUCTOR BACK APPROXIMATELY .60 INCHES FROM THE END OF THE CONDUCTOR. BE CAREFUL NOT TO NICK THE CENTER CONDUCTOR. THERMAL STRIPPERS ARE RECOMMENDED. LEAVE APPROXIMATELY .09 INCHES OF DIELECTRIC ON THE CABLE FOR THE CUP IN THE STIFFENER.

.09 .60

7. INSTALL DIELECTRIC STIFFENER OVER CENTER CONDUCTOR AND THE CABLE DIELECTRIC MAKING SURE THAT CABLE DIELECTRIC IS FULLY SEATED INSIDE CUPPED END OF DIELECTRIC STIFFENER.

8. ENSURE THAT THE CONTACT IS BUTTED AGAINST THE DIELECTRIC STIFFENER. TERMINATE CONTACT USING METHOD A OR B.
   a) SOLDER CONTACT ONTO CENTER CONDUCTOR, PER MIL–STD–2000, USING 63Sn/37Pb SOLDER. CLEAN FLUX RESIDUE USING APPROPRIATE CLEANER.
   b) CRIMP CONTACT ONTO CENTER CONDUCTOR USING A M22520/5–09 DIE (B HEX). IN A M22520/5–01 TOOL FRAME.

9. SLIDE THE BODY OF THE CONNECTOR OVER THE END OF THE CABLE UNTIL THE NOTCH IN THE CONTACT SEATS WITH THE DIELECTRIC RIDGE INSIDE THE CONNECTOR. CAUTION: PUSH CABLE INTO THE CONDUCTOR STRAIGHT TO AVOID KINKING THE CABLE.

ECS M5122

10. FOLD ALL THE BRAIDS OVER THE NECK OF THE CONNECTOR BODY.

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11. SLIDE THE FERRULE UP OVER THE SHIELDS AND AGAINST THE CONNECTOR BODY. TRIM AWAY ANY EXCESS BRAID. CRIMP THE FERRULE ONCE, NEXT TO THE BODY, USING A M22520/5–09 DIE (A HEX) IN A M22520/5–01 TOOL FRAME. APPLY ADHESIVE HEAT SHRINK. 2

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REVISIONS					
ECN	ZONE	REV.	DESCRIPTION	DATE	APPROVED
13939	–	N/C	NEW RELEASE	7/6/01	C CHAPMAN
17356	–	A	CHANGED STIFFENER AND STRIPPING DIM'S	4/16/03	DEK
50362		B	FREQ RANGE 4.5 WAS 6 GHz	8/13/13	CAC
50375		C	INSERTION LOSS 4.5 WAS 6 GHz	8/15/13	CAC

NOTES

1. ENSURE HEAT SHRINK IS INSTALLED PRIOR TO CRIMPING CONNECTOR.
2. ADHESIVE HEAT SHRINK SHOULD BE APPLIED IN ACCORDANCE WITH ECS WORK INSTRUCTION WI007. CONTACT ECS FOR A COPY OF THIS WORK INSTRUCTION.
3. CONNECTOR DIMENSIONS ARE FOR REFERENCE ONLY.

ALL LENGTHS IN INCHES

APPROVALS	DATE
DRAWN BY: P PHALPHOUVONG	06/12/01
CHECKED BY: C CHAPMAN	7/6/01
DESIGNED BY:	
PROJECT ENG:	
ENG. MGR: DAVID E. KNOLL	7/6/01

ELECTRONIC CABLE SPECIALISTS
FRANKLIN, WI 53132
PHONE: (414) 421–5300

TITLE: CUSTOMER SPECIFICATION

MODIFIED SIZE 1, ARINC 600 RF CONNECTOR FOR ECS CABLE 432101 AND 532101

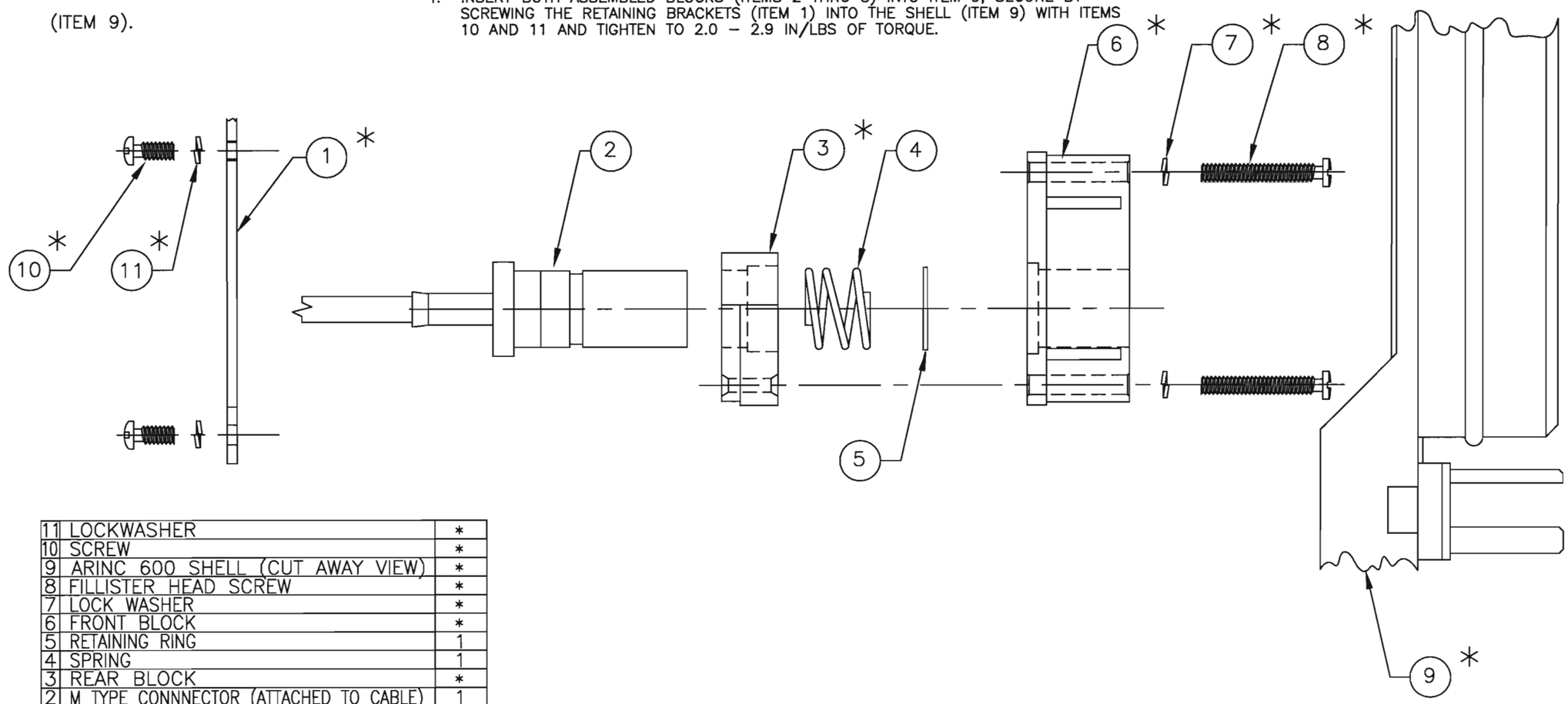
SIZE	CAGE CODE	LEVEL	PART NO.
B	66197		M5122

SCALE: | FILE NO F:\E\SPEC\CONN\INST\M5122-1-I | SHEET: 1 OF 3

INSTALLATION INSTRUCTIONS–RETAINING HARDWARE (FOR CANNON SHELL)

1. BEGINNING WITH THE J1 CONNECTOR, SLIDE ITEMS 3 THRU 5 OVER THE END OF ITEM 2 IN THE ORDER SHOWN UNTIL ITEM 5 SNAPS INTO THE GROOVE OF ITEM 2 (NOTE 2). REPEAT FOR THE REMAINING CONNECTORS (J2–J4) ENSURING THAT EACH CONNECTOR GOES INTO THE CORRECT JACK.
2. INSERT ITEM 2 AND ITS ACCOMPANYING HARDWARE INTO ITEM 6 WHILE OBSERVING PROPER POLARITY OF JACK LOCATIONS. SCREW INTO PLACE WITH ITEMS 7 & 8 AND TIGHTEN TO 2.0 – 2.9 IN/LBS OF TORQUE.
3. REPEAT STEPS 1 AND 2 FOR THE REMAINING BLOCK (ITEM 6) IN THAT SHELL
4. INSERT BOTH ASSEMBLED BLOCKS (ITEMS 2 THRU 8) INTO ITEM 9, SECURE BY SCREWING THE RETAINING BRACKETS (ITEM 1) INTO THE SHELL (ITEM 9) WITH ITEMS 10 AND 11 AND TIGHTEN TO 2.0 – 2.9 IN/LBS OF TORQUE.

(ITEM 9).



ITEM NUMBER	DESCRIPTION	QTY EACH
11	LOCKWASHER	*
10	SCREW	*
9	ARINC 600 SHELL (CUT AWAY VIEW)	*
8	FILLISTER HEAD SCREW	*
7	LOCK WASHER	*
6	FRONT BLOCK	*
5	RETAINING RING	1
4	SPRING	1
3	REAR BLOCK	*
2	M TYPE CONNNECTOR (ATTACHED TO CABLE)	1
1	RETAINING BRACKET	*

NOTES:
1. ASSEMBLE CONNECTOR BODY TO THE CABLE PER SHEET 1 THIS DRAWING.
2. A TOOL IS AVAILABLE UPON REQUEST FROM ECS TO ASSIST IN INSTALLING THE RETAINING RING. THE TOOL PART NUMBER IS I61M.

* NOT SUPPLIED WITH M–SERIES CONNECTOR. QUANTITIES WILL VARY PER ARINC 600 CAVITY.

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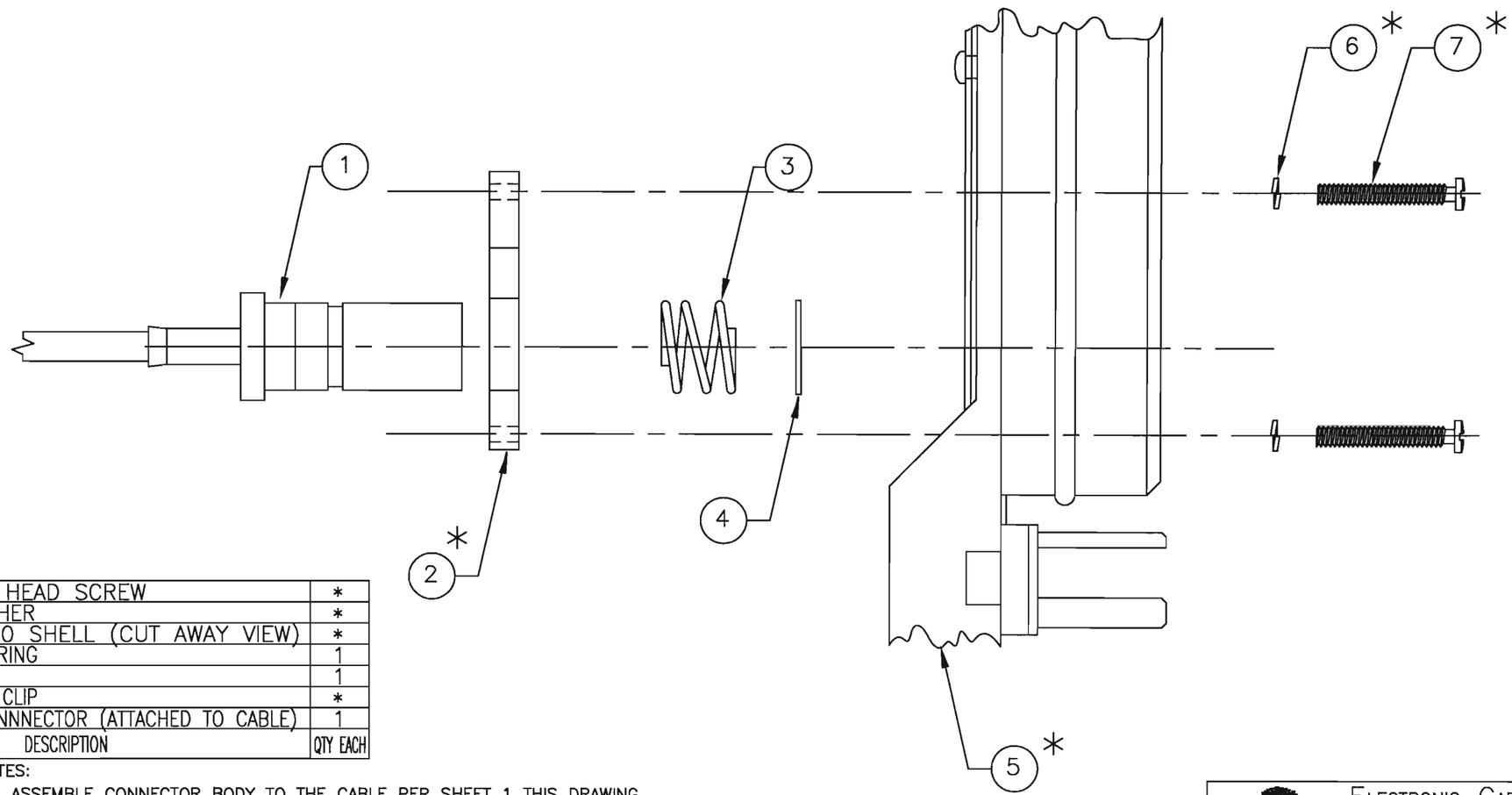
SIZE	CAGE CODE	LEVEL	PART NO.
B	66197		M5122

SCALE: | EFFECTIVITY: | SHEET: 2 OF 3

INSTALLATION INSTRUCTIONS–RETAINING HARDWARE (FOR AMP, SOURIAU, AND RADIALL SHELL)

1. BEGINNING WITH THE J1 CONNECTOR, SLIDE ITEMS 3 AND 4 OVER THE END OF ITEM 1 IN THE ORDER SHOWN UNTIL ITEM 4 SNAPS INTO THE GROOVE OF ITEM 1 (NOTE 2). REPEAT FOR THE REMAINING CONNECTORS (J2–J4) .
2. INSERT ITEM 1 AND ITS ACCOMPANYING HARDWARE INTO ITEM 2 WHILE OBSERVING PROPER JACK LOCATIONS. ITEM 2 SHOULD BE LOCATED BETWEEN THE ITEM 3 AND THE SHOULDER OF ITEM 1. REPEAT FOR THE REMAINING CONNECTORS.
3. INSERT ITEMS 1 THRU 4 INTO ITEM 5.
4. SLIDE ITEM 6 ONTO ITEM 7 AND SCREW ITEM 7 THROUGH ITEM 5 INTO ITEM 2. TIGHTEN ITEM 7 TO 2.0 TO 2.9 IN/LBS TORQUE.



ITEM NUMBER	DESCRIPTION	QTY EACH
7	FILLISTER HEAD SCREW	*
6	LOCK WASHER	*
5	ARINC 600 SHELL (CUT AWAY VIEW)	*
4	RETAINING RING	1
3	SPRING	1
2	SERPENTINE CLIP	*
1	M TYPE CONNNECTOR (ATTACHED TO CABLE)	1

NOTES:

1. ASSEMBLE CONNECTOR BODY TO THE CABLE PER SHEET 1 THIS DRAWING.
2. A TOOL IS AVAILABLE UPON REQUEST FROM ECS TO ASSIST IN INSTALLING THE RETAINING RING. THE TOOL PART NUMBER IS I61M.

* NOT SUPPLIED WITH M–SERIES CONNECTOR. QUANTITIES WILL VARY PER ARINC 600 CAVITY.

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SIZE	CAGE CODE	LEVEL	PART NO.
B	66197		M5122

SCALE: | EFFECTIVITY: | SHEET: 3 OF 3